

Use of Information Retrieval Tools by the Postgraduate Students of Selected Universities in South Western Nigeria.

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Abstract

The paper examined the use of Information Retrieval Tools (IRTs) by the post graduate students of selected universities in south western Nigeria. The study made use of descriptive survey and was carried out over a period of four months between January and May, 2012. The sample size comprise of 2,100 postgraduate students which were randomly selected from different faculties and served with copies of questionnaire. A total of 1,923 copies of useable questionnaire were retrieved which represents 91.6% response rate. The responses were collated and analyzed using frequency counts and simple percentages. The outcome shows that respondents make use of IRTs for various purposes and that their university library's user education and information literacy programme forms the main source of their knowledge of IRTs' usage. This shows that their university libraries plays major role in assisting the respondents to make use of IRTs. Other findings show that the main IRTs made use of by the respondents is the Internet Search Engines. Other findings of the study also revealed that the use of the tools has impacted positively on their social and academic life and also broaden their global knowledge of diverse issues. The major constraint to their use of the tools is that of Internet fluctuations. The paper concludes with recommendations on the need to give training on the use of IRTs to students especially library-based ones.

Keywords: Information retrieval tools, Information retrieval, postgraduate students, use of information retrieval tools.

1. Introduction

Owing to information explosion and the emergence of new technologies, information needed by students is now found in different formats in university libraries, technology centres and computer laboratories. These technologies have brought an alternative to facilitate access to scholarly information for teaching and learning. Consequently, students' information needs for research are met without difficulties. Their information needs can be satisfied from primary sources like journal articles and research reports or secondary sources such as textbooks and reference books like the dictionary and encyclopaedia.

Tertiary sources which include the abstracting and indexing journals can also be used by students to collect current information for research. These information sources are no longer only in print, but in electronic forms. They can now be retrieved from different types of sources such as CD-ROMs, Internet, OPACs, electronic books and electronic journals by using appropriate search strategies including Boolean operators [OR, AND, NOT), truncation, proximity features and search engines such as Yahoo, Google, Excite and Alta vista. Also, electronic books, electronic journals and OPACs can be searched online through the Internet

This massive information that abound both electronically and in paper form has made the need for Information Retrieval Tools (IRTs) to retrieve the information apparent. These tools have developed into widely used services and have become essential tools for finding information. Information retrieval is concerned with the exploitation and extraction of information and other contents of documents from different information sources. The Wikipedia encyclopedia also defines information retrieval as the activity of obtaining information resources relevant to an information need from a collection of information sources. It also went further to explain that many universities and public libraries use information retrieval systems (tools) to provide access to books, journals and other documents. From the foregoing, Information retrieval tools (IRTs) therefore is the means or applications through which information can be accessed from various sources.

Information retrieval tools are crucial for retrieving information for educational outcomes. Also skill is required to selectively retrieve accurate and sufficient information stored in documents instead of all the information that may not be relevant for the students' research. Skill in information retrieval reduces the time wasted in seeking information. To surmount the problem of retrieving information, students may require a combination of skills which include informational retrieval skill, operational retrieval and strategic retrieval skills to make the process of retrieving information a simple task. Gui (2007) reported that the skills for retrieving information needed by

university students include the skill “to navigate, select, evaluate and re-use information”. These skills involve the ability to handle the different retrieval tools that abounds.

Despite the expediency of these tools to information retrieval, their effective use in developing countries is being hampered by varying factors. Findings have revealed that these factors include lack of information search and retrieval skills, low level of user education and information literacy training, and students’ subject backgrounds (Fordjour et.al, 2010 and Jegede, 2005)

2. Research Questions

- Through what means do they acquire the knowledge and skills for IRTs usage?
- What type(s) of IRTs do they make use of?
- How often do Nigerian Universities’ postgraduate students use Information Retrieval Tools (IRTs)
- What role do their various libraries play in assisting them to effectively use IRTs?
- For what purpose do they make use of these tools?
- To what extent has the various IRTs usage impacted the students’ life and work?
- What are the challenges encountered by the postgraduate students in their course of using IRTs?

3. Literature Review

A review of the literature reveals that researchers have identified different aspects of Information Retrieval Tools in terms of their peculiarities, nature of search strategies, query formulation, constant power outage and usage. All these factors contribute to the way in which users use IRTs. Therefore, to access information, users have different tools at their disposal. In the traditional environment and regarding printed materials, placing the right piece of information was important but in the modern information environment, concentration is on using the best retrieval tools. For this reason, different search and information retrieval tools have already been designed and used. Such tools, retrieve, index and classify the information available both in the traditional library and on the web to the benefit of the users.

These tools are updated regularly to keep pace with the speeding growth of the information volume. Information retrieval tools are equipped with facilities with which users should be familiar if they are to make the best use of them.

Information retrieval tools (IRTs) are systems created for retrieval of information. Retrieval tools are essential as basic building blocks for a system that will organize recorded information that is collected by libraries, archives, museums, etc. They are also engaged to find information in electronic form, in databases, digital libraries, and networks. Examples of this are bibliographies, card catalogues, indexes, subject gateways, directories, OPAC, CD-ROMS, online databases, internet search engines, etc.

Fordjour et. al. (2010) studied the prospects and challenges of information retrieval by the University of Ghana, Legon students. Findings show that the students were fully aware of information retrieval tools and depending on the Faculty students belong used them. However, the use of the information retrieval tools to obtain relevant information was a problem with all the faculties. The main reasons for the difficulties in retrieval of information was attributed to frequent disruption of Internet, inadequate time by students on campus and non-availability of training programmes to educate students on how to use information retrieval tools to obtain relevant information. The problems notwithstanding, there have been positive uses of the search tools to retrieve relevant information by all the faculties.

Examining individuals’ attitude towards search engines as a tool for retrieving information, Liaw & Huang (2003) reported that:

“Individual computer experience, quality of search systems, motivation, and perceptions of technology acceptance are all key factors that affect individual feelings to use search engines as an information retrieval tool”.

The results of a survey conducted by Nazim (2008) to examine the information searching behavior of Internet user at Aligarh Muslim University (AMU) shows that the academic staff spent more time on the Internet than the students and research scholars and also, Internet search engines were the preferred information searching tool, other methods such as databases, gateways and World Wide Web (WWW) were also used. Online journals and databases were the preferred information sources among them. Other research similarly showed the success of library users in obtaining materials, particularly through electronic retrieval tools to satisfy their information needs in an academic library (Ciliberti, Radford and Radford in Ariyapala and Edzan, 2002).

A study of web search behavior of 16 selected libraries in Ahmedabad and Gandhinagar, conducted through a survey, reveals the satisfaction level of the LIS (library and information science) professionals with the type of information sought through search engines. The findings indicate the dependency of LIS professionals on the

search engines and the familiarity of the advanced search options available in the search engines (Batthini & Madnani, 2003).

From an informative review on Web searching studies, Jansen & Pooch in Malik & Mahmood (2009) reported that:

“Comparing the searching characteristics of Web users with those of users of traditional information retrieval (IR) systems, differences were found in the behavior of the two categories of searchers in using terms per query, searching session length, and use of Boolean operators or advance search features”.

Brophy and Bawden in Martzoukou (2008) also compared an Internet search engine (Google) with academic library retrieval tools in order to assess the relevant value, strengths and weaknesses of the systems and found that good coverage requires the use of both systems as both have unique features. They concluded that both systems had advantages and disadvantages but Google managed to retrieve a high proportion of relevant documents, adequate or good quality results and unique documents and there were no problems with accessibility.

Chang and Perng in Malik & Mahmood (2009) investigated the information requirements and search habits of graduate students at Tatung University, results shows an extensive use of the Internet by the students and mostly about Web-based databases, electronic journals, and search engines. In sharp contrast to the foregoing is the finding of Liyana, Noorhidawati, & Hafiz (2010) on the use of information retrieval tools by postgraduate students of the computer science department of the University of Malaya, where they reported that the students were having difficulties in finding information that is suitable to their learning style using available information retrieval tools.

4. Research Methodology

Considering the nature of this study, descriptive survey research design was used. The study population of this research work is the postgraduate students in selected universities in south western Nigeria. University of Ibadan, University of Lagos, and University of Ilorin are federal universities and among the first generation universities in Nigeria. Tai Solarin University of Education is a state university and the first University of Education in Nigeria; Lagos State University is among the first set of State universities in Nigeria, while Babcock and Covenant Universities are among the first private universities in Nigeria. The postgraduate students consist of masters, master of philosophy and doctoral students. The study was carried out over a period of four months between January and May, 2012. The sample size comprise of 2,100 postgraduate students which were randomly selected from different faculties and served with copies of questionnaire. Since the population of the students in each of the institutions was not evenly distributed, sample selected also took the same pattern. A total of 1,923 copies of useable questionnaire were retrieved which represents 91.6% response rate.

5. Discussion of Major Findings

This study presented the results of a survey on the use of Information Retrieval Tools (IRTs) by post graduate students of selected universities in the south-western region of Nigeria. Findings show that respondents make use of IRTs for various purposes as reported on Table VI, and that their university library's user education and information literacy programme forms the main source of their knowledge of IRTs' usage. This shows that their university libraries plays major role in assisting the respondents to make use of IRTs. Other findings show that the main IRTs made use of by the respondents is the Internet Search Engines. This corroborates the findings of Nazim (2008) and Chang et. al. (2009) who conducted surveys to examine the information searching behaviour of information retrieval tools users and found that Internet search engines were the preferred information searching tools. This is in sharp contrast to the findings of Liyana et. al. (2010) who reported that the students they examined were having difficulties in finding information that is suitable to their learning style using available information retrieval tools. Other findings of the study also revealed that the use of the tools has impacted positively on the postgraduate students' social and academic life and also broaden their global knowledge of diverse issues. This is also in agreement with Fordjour et. al. who observed positive uses of the search tools to retrieve relevant information by his respondents. The major constraint to their use of the tools is that of Internet fluctuations. This is in consonance with the findings of Fordjour et. al. (2010) who reported that the main reason for the difficulties in retrieval of information was attributed to frequently disruption of Internet.

6. Conclusion and Recommendations

The result of this research has raised some implications for university libraries and librarians. The study raised a vital point that universities provided several information resources in their libraries but the university library based retrieval tools for accessing these resources were occasionally used. This implies that the libraries' resources were

underutilized and that average postgraduate students goes to the library mainly to use the Internet as this study revealed that the most widely used information retrieval tool is the Internet Search Engine and neither the OPAC nor the card or book catalog. It has become clear from this study that the postgraduate students studied were interested in utilization of Internet resources for research.

Another implication of this study is that the postgraduate students who were expected to present theses to their departments before completion of their studies did not use the university libraries as their access point for use of information resources. This implies that there may be absence of information resources peculiar to students' discipline in their libraries or they are unable to manipulate the library-based retrieval tools.

It is evident from the study that information retrieval tools are vital for utilization of information resources. Also, information resources are provided in the university libraries with retrieval tools for accurate and fast retrieval of information but it may also be probably due to lack of skills and interest in these tools that postgraduate students in the universities did not fully utilize the tools to retrieve information. From the foregoing, these should be seen as obstacles that should be surmounted so that they can fully benefit from the resources provided in the university libraries.

Consequent upon the above findings, the following recommendations were suggested:

- There should be constant awareness programme in the university libraries which should be tailored to informing students of the information retrieval tools of not just the Internet Search Engines but all the information retrieval tools available for information retrieval.
- University libraries should be more involved in training students to acquire the skills for using information retrieval tools. Also emphasis should be on different search and retrieval strategies that can adequately retrieve information for learning and research.
- Information retrieval skills should be embedded in the curriculum so that the students would be conversant with them and equally make use of them.
- Academic staff should encourage the students to make use of the information retrieval tools by ensuring that students are frequently given assignments that would require the use of the tools that are available in their libraries.
- There should be organized training of the staff in the libraries on the use of information retrieval tools so as to efficiently assist students in accessing and retrieving information for research.

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List of tables

Table I: Questionnaire Distribution and Response Rate

S/N	Institution	Questionnaire distributed	Questionnaire Returned	Percentage
1.	University of Lagos (UNILAG)	350	332	94.9%
2.	University of Ibadan (UI)	350	337	96.3%
3.	University of Ilorin (UNILORIN)	300	270	90.0
4.	Tai Solarin University of Education (TASUED).	270	258	95.6%
5.	Lagos State University (LASU)	300	256	85.3%
6.	Babcock University (BU)	265	238	89.8%
7.	Covenant University.(CU)	265	232	87.5%
8	Total	2100	1923	91.6%

Table I shows the number of questionnaire administered and the responses from the sampled universities.

Table II: Demographic Information

Demographic Information	Items	Frequency Count	Percentage
Sex	Male	1006	52.3%
	Female	1174	47.7%
Type of Programme	Masters	1161	60.4%
	M.Phil/Ph.D	762	39.6%

The demographic information of the respondents is reported on Table II. The only demographic information extracted from the respondents is gender and type of programmes registered for. Findings show that 52.3% are female while 47.7%. Also, 60.4% are registered for the degree of masters while 39.6% are enrolled for the masters and doctors of philosophy degrees.

Table III: Source of Students' IRTs knowledge and skills

Source of IRTs' knowledge and skills	Frequency count	Percentage %
Cybercafés', ICT centres and Library Staff	455	23.7%
Formal training	284	14.8%
Friends, colleagues and course or school mates	380	19.8%
Library's user education and information literacy programme	1262	65.6%
Self-taught	647	33.6%
University's ICT training programme	157	8.2%

Table III shows that the leading source of the respondents' knowledge and skills for using IRTs is the user education and information literacy programme of their university libraries, while the least is their university's ICT training programmes. These carry 65.6% and 8.2% of the responses respectively.

Table IV: Types of IRTs made use of

Types of IRTs	Frequency count	Percentage %
Card and book catalogs	297	15.4%
External storage devices (CD-ROMS, flash drives, zip-disks, etc.)	124	6.4%
Internet Search Engines	1096	57.0%
Online Databases	232	12.1%
Online Public Access Catalog (OPAC)	274	14.2%
Subject directories and Gateways	168	8.7%
Other	23	1.2%

Table IV (page 7) reports the types of IRTs made use of by the respondents. The Internet Search Engines records the highest percentage of 57.0%, followed by card and book catalogues with others indicated by the respondents to be the back of book and bibliographic index which records as low as 1.2% response.

Table V: Frequency of using IRTs

Frequency of use	Frequency count	Percentage %
Very frequent	1107	57.6%
Frequent	544	28.3%
Occasionally	259	13.5%
Never	13	0.7%

Table V shows that majority of the respondents (57.6%) agree that they make use of IRT frequently, while only 0.7% has never made use of IRTs.

Table VI: Purpose of using IRTs

Purpose of use	Frequency count	Percentage %
Academic and Research	1845	95.9%
Admission opportunities	93	4.8%
Funds, grants and scholarship	237	12.3%
Entertainment (sports, news, movies, songs, etc.)	213	11.1%
General (travel, tour, weather forecast, etc)	107	5.6%
Social networking (face book, twitter, two, e-mail, newsgroup, etc.)	1687	87.7%

Table VI shows that 95.9% of the respondents make use of IRTs for academic and research purposes, followed by social networking which has 87.7% response rate, while a paltry number (5.6%) of the respondents make use of IRTs to retrieve general information which includes travel, tour, weather forecast, etc.

Table VII: Impact of using IRTs on Respondents' life and work

Purpose	Frequency count	Percentage %
Hastened and enhanced my academic work	1596	83.0%
Better and well connected with opportunities globally	968	50.3%
Well-informed and better educated on happenings across the globe	1123	58.4%
Social and educational networking with friends across the globe	1094	56.9%

The impact of IRTs usage is what Table VII sought to report. This recorded an encouraging response on the item listed as shown in the percentages of their responses with the highest of 83.0% agreeing to the fact that the use of IRTs has greatly enhanced and hastened their academic work.

Table VIII: Challenges faced by Respondents when using IRTs

Purpose	Frequency count	Percentage %
Lack of adequate skills and knowledge	573	29.8%
Financial constraints	1008	52.4%
Information overload	372	19.3%
Internet fluctuations	1356	70.5%

On the challenges encountered by respondents with their use of IRTs (Table VIII; page 8); the challenge that records the highest percentage is that of Internet fluctuations which recorded a 70.5% response rate followed by financial constraints with a percentage of 52.4%.

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